

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving Public Safety Communications	)	
in the 800 MHz Band	)	<b>WT Docket No. 02-55</b>
	)	
Consolidating the 900 MHz Industrial/Land	)	
Transportation and Business Pool Channels	)	

To: The Commission

**COMMENTS OF THE CITY OF BALTIMORE, MARYLAND**

**Introduction**

1. The City of Baltimore, Maryland ("Baltimore"), hereby submits these comments in response to the Commission's Notice of Proposed Rule Making ("NPRM") in the above-captioned proceeding, FCC 02-81, released March 15, 2002. Baltimore operates a 28-channel 800 MHz radio system that serves police, fire, emergency, and public works agencies throughout the city (the "System") and is integrated with similar systems serving adjacent jurisdictions. Baltimore spent approximately \$70 million in public funds to build the System, which has been in service for less than four years. The System must operate full-time, with 100% reliability and no interruption in service. Preserving the integrity and effectiveness of the System should be afforded the highest priority. To retune or rebuild the System on other frequencies would be logistically extremely difficult and is probably not feasible at all as a practical matter.

2. Even if such a rebuild could be undertaken, it would be very costly. Baltimore faces increasing demand for public safety services and declining tax revenues and does not have any additional funds available for a rebuild or, for that matter, any restructuring or re-engineering of the System. Nextel's financial offer is totally inadequate to fund rebuilding the System and other similar public safety systems throughout the country.

3. Baltimore's system has experienced interference and is apparently targeted as one of the areas where interference problems are worst. The information available to Baltimore suggests that Nextel's systems are the cause of most, if not all, of the interference problems. These problems have been created by Nextel or other commercial operators, not Baltimore; and it is up to those operators to correct them at their own cost. The burden must not be shifted in whole or in part to public safety agencies. On the contrary, public safety systems, which are facing increasing demands since the September 11 tragedy, should be given the highest priority; and commercial operators that interfere with public safety transmissions should bear the burden of ensuring that fully reliable public safety communications are not disturbed. The convenience of commercial operators and their desire to control large blocks of interference-free spectrum to accommodate business growth must not outweigh the critical public safety needs of the nation. Baltimore's System should be left undisturbed and should be protected, and the Commission's efforts should be directed toward having those who cause interference eliminate it.

4. The Nextel and other proposals that have been advanced to date are overly simplistic and do not take sufficient account of varying fact patterns or solutions. The Commission may wish to consider creating a public safety/industry committee to investigate and develop the full facts with regard to interference to public safety communications, which likely vary from jurisdiction to jurisdiction.

#### **The Baltimore System**

5. Since 1998, Baltimore has operated a 28-channel trunked 800 MHz system (the "System"), utilizing nine antenna sites with 28 repeaters at each site. The antenna sites are connected to one another by an optical fiber SONET ring. The System provides vital dispatch and other communications services to Baltimore's Police and Fire Departments as well as to the city's Department of Public Works. It is compatible with systems used by Baltimore

County, Anne Arundel County, and Baltimore Gas & Electric Co., allowing officials responsible for public safety throughout the region to work together in responding to area-wide emergencies.

6. Because the System is trunked and is shared by more than one agency, it is effective and efficient; it serves approximately 5,000 radio sets in Baltimore City alone. The System is critical to ensuring the safety of police, fire, emergency, and public works employees, as well as the public at large. Even brief disruptions in service cannot be tolerated and can result in the loss of life and/or property. Police and fire events take no holiday, and not a single dispatch call must be missed. The System must also be able at any time, and with no notice, to handle a major emergency with heavy radio traffic, such as the CSX railroad tunnel fire in 2001 that disrupted traffic and communications in Baltimore for almost a full week.<sup>1/</sup>

#### **Relocation Issues**

7. The System works well and is up-to-date. Moving it to other frequencies would be extremely difficult in terms of both logistics and cost. It would be necessary to reprogram some 5,000 radios and to replace or to retune 252 repeaters. If the System were moved to the 700 MHz or 900 MHz band, all of the radios and repeaters would have to be replaced.<sup>2/</sup>

8. Because no interruption of support for police, fire, or other emergency operations can be tolerated, any frequency change, and especially a move to a new band, would

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1/ Baltimore is also the nearest large city to the nation's capital, Washington, DC. It is important to preserve the capability of Baltimore to participate in responding to and alleviating any crisis that may strike Washington.

2/ While the NPRM does not specifically propose relocating public safety systems to 700 or 900 MHz, that concept has been advanced during some industry meetings where the instant rule making proceeding has been debated and discussed.

essentially require the construction of a parallel repeater system, which would have to be fully up and running before the existing system could be shut down. However, not all of the towers now used for repeaters have room for additional antennas; and new sites are not easy to locate in the Baltimore area. The City does not have the authority to require a tower owner to accommodate its system. Moreover, any new towers would have to be located on the SONET ring path, or else new fiber would have to be installed to reach the new repeater sites.

9. It cost some \$70 million four years ago to construct the System, including a new communications center. Reconstructing the radio elements of the System would undoubtedly cost some tens of millions of dollars today, apart from any costs to modify the SONET ring. Baltimore does not have any financial resources available to finance that expense, especially with a declining tax base that has resulted in reduced tax revenues, accompanied by increased security concerns that require a higher level of readiness and response capability. Nextel's \$500 million subsidy offer nationwide clearly would not even begin to pay the costs of Baltimore and other similarly situated other jurisdictions.

#### **Interference Conditions**

10. Baltimore has in fact experienced interference to the System over the past several months in the form of an apparently unauthorized RF carrier appearing on one or more of Baltimore's licensed channels, sometimes for several hours at a time. While Baltimore has not identified the source of this interference with complete certainty, it is well known that Nextel is the heaviest user of interleaved 800 MHz channels, operates a cellular-type system with dense spectrum occupancy, and frequently makes changes in its facilities to accommodate subscriber growth.<sup>3/</sup> Based on discussions with its maintenance contractor, Baltimore believes

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<sup>3/</sup> While this interference is co-channel, rather than adjacent-channel, there have also been reports of overloading the front end of radio receivers and interference directly attributed to such overload. See *Project 39, Interference to Public Safety 800 MHz Radio systems, Interim Report to the FCC*, December 24, 2001.

that Nextel's systems are likely the primary cause of the interference it has experienced. Baltimore operates a Motorola SmartNet System, which includes a zone controller capable of detecting foreign carriers and shutting down the channel receiving interference until it is clear. Thus users of Baltimore's trunked radios have not experienced interruption of their traffic yet; but the overall capacity of the System has been reduced, risking impairment during a major emergency like the CSX tunnel fire.

11. Section 301 of the Communications Act explicitly prohibits the transmission of radio signals except pursuant to a license or other authority of the Commission. In addition, under Section 90.403(e) of the Commission's Rules, an entity causing interference to another licensed operator is obligated to correct the harmful interference it is causing. It is important that the Commission maintain the proper focus in this proceeding -- on the causer of interference. Priority must be afforded to critical public safety services, and those who are causing a problem must be required to find a remedy without disturbing public safety and without shifting costs to local governments.

### **Remedies**

12. While it may be attractive on the surface to have the prospect of an interference-free public safety band with more spectrum capacity than is now available, it is important to recognize how difficult and expensive it would be to implement such a proposal. The amount of money currently being discussed will not come close to financing the relocation and reconstruction of the nation's public safety radio system infrastructure. Because absolute and full-time reliability is critical, the revamping of a public safety system is a major undertaking, particularly where the goal is to dismantle, rather than only to supplement, existing systems. Baltimore's System is an example of a jurisdiction that will not lend itself to an easy transition.

13. Moreover, the forced removal of Baltimore's System to other frequencies would place the burden of the remedy on a party that did not cause the problem. Licenses to use spectrum are granted on the premise that each user will occupy only that capacity licensed to it and will not impair the operations of other users on the same or adjacent channels. In other words, the offending users, whether Nextel or others, who are causing the interference must develop techniques so that their systems stop causing interference, rather than imposing a plan that makes the victims of interference get out of the way.

14. Baltimore is identified in the NPRM as one of the markets where interference has been observed.<sup>4/</sup> Baltimore agrees that the problem must be remedied; but it does not agree that the answer is to dismantle its new, efficient, and effective radio system without a true make-whole approach that goes a well beyond what any party has yet offered. Baltimore also believes that the interference problem may have been overstated by commercial parties who see an opportunity to gain valuable blocks of spectrum. The interference problem exists, but its severity varies from area to area, and its cause may also vary. Because facts and circumstances may vary across jurisdictions, it may not be possible to come up with a "one-size-fits-all" solution such as the proposals currently on the table. It may be prudent to establish a public safety/commercial industry investigative committee to develop a clearer record before the Commission rushes to impose costly and disruptive remedies that may go beyond what is necessary.

15. Meanwhile, where interference does exist, those currently causing interference must find ways to ameliorate it, in the short as well as the long term. The purpose of this proceeding must remain focused on public safety and not the improvement of commercial services or the convenience of commercial operators. None of the proposals that have been

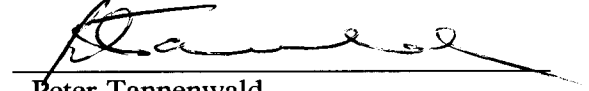
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4/ NPRM at par. 14. *See also* fn. 1, *supra*.

advanced thus far, whether by Nextel, the National Association of Manufacturers, or other parties whose proposals have come to Baltimore's attention, start from the right premise. The Commission should look very carefully, gather complete factual information, and explore all avenues for having the causers of interference take ameliorative steps that do not disturb the public safety community before any wholesale band reorganization plan is adopted.

Irwin, Campbell & Tannenwald, P.C.  
1730 Rhode Island Ave., N.W., Suite 200  
Washington, DC 20036-3101  
Tel. 202-728-0400  
Fax 202-728-0354

Respectfully Submitted,



Peter Tannenwald  
David A. Irwin  
Tara B. Shostek

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Special Project Counsel to  
the City of Baltimore